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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/494,278	01/30/2000	Bill J. Pope	6061 P	3224

7590 03/12/2002

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EXAMINER

ISABELLA, DAVID J

ART UNIT

PAPER NUMBER

3738

DATE MAILED: 03/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/494,278

Applicant(s)

POPE ET AL

Examiner

DAVID J ISABELLA

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
- 4a) Of the above claim(s) 68-100 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-28 is/are allowed.
- 6) ☒ Claim(s) 29,30,32-36,39-63,66 and 67 is/are rejected.
- 7) ☒ Claim(s) 31,37,38,64 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

Claims 68-100 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non elected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8. Due to the scope of claims 1-67, Examiner has removed the species requirements. Claims 1-67 will be examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 56,57,66 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Pope,et al (5,645,601).

Pope, et al discloses a prosthetic joint having first and second members with a fixation portion and a load bearing/articulation portion. The joint includes a volume of diamond on the load bearing/articulation portion.

Claims 66 and 67 see column 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-30,,32-36,39-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pope, et al (5,645,601 in view of Turchan et al (5,554,415).

Pope, et al discloses a prosthetic joint having first and second members with a fixation portion and a load bearing/articulation portion. The joint includes a volume of diamond on the load bearing/articulation portion. Turchan, et al teaches a method for coating a substrate with PCD via sintering. Additionally, Turchan, et al provides for a transition zone and the feature of a mechanical grip. Pope,et al is silent to specific methods to achieve a PCD coating on a substrate. Pope, et al describes that the PCD layer could be bonded to the joint surfaces by any satisfactory method including different methods for different surfaces. Turchan, et al outlines various known methods to provide for a PCD layer on surgical items including sintering. Moreover, Turchan, et al describes the provision of a gradient between the substrate and the PCD and the use of mechanical grip on the substrate to provide more effective bonding of the PCD (see columns 23 and 24). Pope, et al defines the broad concept of cooperating surfaces of a prosthetic joint being provided with a coating of PCD. This coating provides excellent tribological

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properties to the prosthesis. Pope, et al fails to disclose specific methods for providing the coating but states that those skilled in the art could use any known methods.

Turchan, et al provides the specifics to the arrays of methods available to those skilled in the art including sintering. In light of the teachings of Turchan, et al, the joint/coating combination of Pope, et al would have been obvious to one of ordinary skill in the art based upon engineering considerations. The specifics to the chemical bonds, mechanical grip, topographical features, stress field, Ra value, polishing, specific orthopedic structure for bone applications, materials and substrate layers are fully disclosed in the patent to Turchan, et al.

Claims 58-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pope, et al (5,645,601) further in view of Turchan et al (5,554,415).

Pope, et al discloses a prosthetic joint having first and second members with a fixation portion and a load bearing/articulation portion. The joint includes a volume of diamond on the load bearing/articulation portion. Turchan, et al teaches a method for coating a substrate with PCD via sintering. Additionally, Turchan, et al provides for a transition zone and the feature of a mechanical grip. Pope, et al is silent to specific methods to achieve a PCD coating on a substrate. In fact, column 4, lines 1+, Pope, et al describes that the PCD layer could be bonded to the joint surfaces by any satisfactory method including different methods for different surfaces. Turchan, et al outlines various known methods to provide for a PCD layer on surgical items including sintering. Moreover, Turchan, et al describes the provision of a gradient between the substrate

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and the PCD and the use of mechanical grip on the substrate to provide more effective bonding of the PCD (see columns 23 and 24). Pope, et al defines the broad concept of cooperating surfaces of a prosthetic joint being provided with a coating of PCD. This coating provides excellent tribological properties to the prosthesis. Pope, et al fails to disclose specific methods for providing the coating but states that those skilled in the art could use any known methods. Turchan, et al provides the specifics to the arrays of methods available to those skilled in the art including sintering. In light of the teachings of Turchan, et al, the joint/coating combination of Pope, et al would have been obvious to one of ordinary skill in the art based upon engineering considerations.

Allowable Subject Matter


Claims 31,37,38,64,65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-28 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID J ISABELLA whose telephone number is 703-308-3060. The examiner can normally be reached on MONDAY-FRIDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CORRINE MCDERMOTT can be reached on 703-308-2111. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3580 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.



DAVID J ISABELLA
Primary Examiner
Art Unit 3738

dji
March 8, 2002

Attachment for PTO-948 (Rev. 03/01. or earlier)

6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01. or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application.